WASHINGTON STATE DEPARTMENT OF
Natural Resources
Doug Sutherland - Commissioner of Public Lands

Pilot Study on Feasibility of Geoduck Aquaculture on State-Owned Aquatic Lands

The 2003 Legislature directed the state Department of Natural Resources (DNR) to develop a **Pilot Project** proposal to study the feasibility of geoduck aquaculture on tidelands and submerged lands DNR manages in Puget Sound as a public trust.

Geoduck aquaculture was experimented with in the early 1990's in Washington. Young geoduck were grown at a state-operated hatchery and planted on the seabed. When it was determined that survival of young geoduck was very low, enhancement efforts were stopped. Recent private sector intertidal aquaculture efforts in Washington and subtidal efforts in Canada suggest it's time for another look at the potential of geoduck aquaculture in Washington.

More information needed

Currently there are about 90 acres of private tidelands scattered throughout Puget Sound that are involved in geoduck cultivation. However, the impacts of this cultivation have not been assessed. Potential beneficial impacts include increased production from cultured geoducks (in the current fishery or in leases of state-owned aquatic lands), creation of new geoduck beds, and increased employment opportunities. The economic potential has recently attracted the interest of an increasing number of growers and geoduck harvesters, and may provide an opportunity to develop new market opportunities. Some have speculated that a tenfold increase in geoduck sales from Washington is possible. As a result, DNR has received applications to lease tidal and subtidal state-owned aquatic lands for geoduck culture.

However, before the potential benefits of geoduck aquaculture can be realized, a number of questions need to be addressed. DNR has not approved any applications pending its staff acquiring more information on a number of questions, including feasibility, environmental, economic and legal issues.

Environmental and existing fishery impacts

Potential impacts to native geoduck populations and other species need to be understood to ensure that the benefits of geoduck aquaculture do not cause unintended negative consequences on these species.

Questions relating to disease, competition for food, predator population effects, and impacts on the existing native geoduck fishery need to be understood. The addition of cultured geoduck to the market adds another complexity to the enforcement of harvest and health laws.

More ➔

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Proposed Time Line

2003

July

Legislature gives direction

August - October

Preliminary discussion with co-conveners and stakeholders

September - October

Sign contract with UW, et. al.

November 14

Status report to Senate

November

Literature review complete

November '03 - September '04

Meetings with co-conveners and stakeholder groups

December '03

Status report to Senate

2004

January -February

Status report to Legislature

April - July

Field site visits as necessary

September - December

Prepare final recommendation/ proposal to Legislature

2005

January

Pilot project proposal presented to Legislature

Legal responsibilities

The most significant legal question associated with geoduck aquaculture is related to Tribal Treaty Rights. The federal court Rafeedie Decision (U.S. v. Washington), affects 18 tribes located along Puget Sound and the Straits of Juan de Fuca. This decision affirms the tribes' treaty right to take, from natural beds, up to fifty percent of the total allowable catch of any shellfish species (including geoduck) within the usual and accustomed areas for that tribe, and to share in the management of the geoduck resource.

At this time, the Tribes have indicated a willingness to explore adding geoduck aquaculture to the current management. Before opening or expanding any fishery, the State and all affected Tribes need to reach agreement on how the proposed aquaculture fishery would be managed.

Assessment of cultivation methods

Geoduck intertidal (within tidal areas) aquaculture is better understood than sub-tidal aquaculture, although both are experimental and continuing to evolve. Much of the information is proprietary to the entrepreneurs who are pioneering this area. Geoduck planting methodology, planting density, predator control, and cost-benefit analyses are just some of the key considerations for success in geoduck aquaculture.

With knowledge gained from this Pilot Project, DNR will develop a clear policy about leasing state-owned aquatic lands for geoduck aquaculture, enhancement of the current wildstock fishery, and what DNR's role should be.

Proposal for pilot study

1. Washington State's Department of Natural Resources is developing a pilot study proposal funded by the 2003 Legislature. The study proposal will consist of working with University of Washington School of Aquatic & Fishery Sciences (UW), co-conveners and stakeholders to:Design research projects, which would:
   - Evaluate environmental impacts of intertidal and subtidal cultivation
   - Advance cultivation practices
   - Examine economic feasibility
   - Show long-term sustainability
   - Address management and enforcement concerns
2. Develop geoduck cultivation site criteria and culture methods that minimize impacts to existing fisheries and ecological systems.
3. Develop methods to minimize poaching and wastage.
4. Determine the necessity of developing an Environmental Impact Statement, Management Plan, and/or Habitat Conservation Plan for geoduck cultivation on state aquatic land.
5. Present Geoduck Aquaculture Pilot Program Proposal to 2005 Legislature.

Co-Conveners
Department of Natural Resources, Washington Department of Fish and Wildlife, Tribes

Stakeholders
Department of Health, Washington State Department of Agriculture, Department of Ecology, Pacific Coast Shellfish Growers Association, GHA, National, Oceanic and Atmospheric Administration, Local jurisdictions, upland property owners, geoduck purchasers & wholesalers, Legislature